

What Is Claimed Is:

1. A fingerprint recognizing device comprising:
a transparent electrode layer to which one
5 terminal of an AC power source is connected;
a light emitting layer formed on the transparent
electrode layer and forming an electric field between
the transparent electrode layer and a finger forming a
ground contact when being contacted with the finger and
10 emitting light by this electric field for generating an
optical fingerprint image according to ridge lines of a
fingerprint image formed on the finger;
a plurality of patterned floating electrodes
arranged on the surface of the light emitting layer at a
15 predetermined interval and turned on/off to output the
optical fingerprint image; and
a transparent insulating layer formed at the
bottom of the transparent electrode layer and for
transmitting the optical image generated from the light
20 emitting layer.

2. The fingerprint recognizing device of claim 1,
wherein the device further comprises an insulating layer
formed on the upper portions of the floating electrodes
25 in order to prevent the penetration by impurities
between the plurality of patterned floating electrodes
and make the floating electrodes stronger against a wet

09985905-110601

finger.

3. The fingerprint recognizing device of claim 1,
wherein the device further comprises a dielectric layer
5 formed between the patterned floating electrodes and the
light emitting layer in order to increase the luminance
of the light emitting layer.

4. A method for fabricating a fingerprint
10 recognizing device comprising the steps of:

forming a transparent insulating layer using a
transparent insulating material;

forming a transparent electrode layer on the
transparent insulating layer using a transparent
15 conductive material;

mixing 25~35wt.% dielectric polymer paste, a
25~29wt.% retarder, and 30~50wt.% dopant-doped luminous
powder and then forming a light emitting layer on the
top of the transparent electrode layer using the
20 mixture; and

forming a plurality of patterned floating
electrodes on the surface of the light emitting layer
using a conductive material so that they are spaced at a
predetermined interval.

25

5. The method of claim 4, wherein the method
further comprises a step for forming an insulating layer

0995505-110601

using an insulating material on upper portions of the floating electrodes so that the space between the plurality of patterned floating electrodes¹ can be buried.

5

6. The method of claim 5, wherein the insulating layer is formed of a hydrophobic material.

7. The method of claim 4, wherein the method
10 further comprises a step for forming a dielectric layer between the patterned floating electrodes and the light emitting layer in order to increase the luminance of the light emitting layer.

15

T09011"50659660